

B5  
49. (Amended) A method for identifying clones encoding a DIO-1 polypeptide of SEQ ID NO: 2, or SEQ ID NO: 4, comprising screening a genomic or cDNA library with a nucleic acid probe according to Claim 41 under low stringency hybridization conditions, and identifying those clones which display a substantial degree of hybridization to said probe.

53. (Amended) A method to produce specific monoclonal and polyclonal antibodies against the polypeptide encoded by SEQ ID NO: 2 or SEQ ID NO: 4 comprising the injection of the polypeptide into a mammal.

B6  
54. (Amended) A method for treatment of diseases which are characterized by the alteration in cell death or by hyperproliferation, comprising, administering compounds encoded by SEQ ID NO: 2 or SEQ ID NO: 4, or agonists or antagonists to SEQ ID NO: 2 or SEQ ID NO: 4.

55. (Amended) The method of Claim 54, comprising, administering a therapeutically effective amount of the compound.

56. (Amended) The method according to Claim 54, in which the disease is cancer, an autoimmune disease, diabetes, rheumatoid arthritis, benign and malignant tumors or hyperproliferative skin disorders.

57. (Amended) A method for treatment of diseases which are characterized in the alteration in cell death or by hyperproliferation, comprising, introducing into a mammal a nucleic acid vector according to Claim 44 and wherein said nucleic acid vector is capable of transforming a cell in vivo and expressing said polypeptide in said transformed cell.

B7

59. (Amended) A method for identifying a ligand to SEQ ID NO: 2, or SEQ ID NO: 4, or agonists or antagonists to SEQ ID NO: 2, or SEQ ID NO: 4, comprising, screening for an agonist or an antagonist of the polypeptide signal transduction to be used for treating metabolic, proliferative or inflammatory conditions.

---